

**2 DAYS WORKSHOP
ON
INTERNET OF THINGS (IoT)**

Workshop Highlights

- What “the Internet of Things” means and how it relates to Cloud computing concepts
- How open platforms allow you to store your sensor data in the Cloud
- The basic usage of the Arduino environment for creating your own embedded projects at low cost.
- How to connect your Arduino with your Android phone.
- How to send data to the Internet and talk to the Cloud.
- How to update sensor readings on Twitter (Social Networking Sites).
- Control a Relay Switch by texting from your Phone.

Course Content

Day 1

* Introduction to the Internet of Things

- The Internet of Things
- The Basics of Sensors & Actuators
- Basic IOT Architecture

* The Arduino Platform

- The Arduino Open-Microcontroller Platform
- Arduino Basics
- Arduino Board Layout & Architecture

* Reading from Sensors

* Programming fundamentals (C language)

* Arduino Programming & Interface of Sensors

- Interfacing sensors with Arduino
- Programming Arduino
- Reading from Sensors

Project 1: Simple LED Program for Arduino

Project 2: Integrating Sensors & Reading Environmental Physical Values.

Project 3: Reading Environmental Values on Android Smartphone.

- Talking to your Android Phone with Arduino
- Connecting Arduino with Mobile Device.
- The Android Mobile OS.
- Using the Bluetooth Module

Project 4: Voice Controlled Mini Home Automation using Android Smartphone

Project 5: Control Devices using Local host Web Server for Home Automation.

- Integrating Ethernet Module & Testing DHCP Connection
- Creating Program for Local host Web Server for controlling devices.

Day 2

Project 6: Being Social on Twitter & update status on Twitter through Arduino

- Make Electronics Gadget Talk to Internet
- Integrating Ethernet Module
- Creating App on Twitter

Project 7: Send Voltage& Analog Data on Cloud Server.

- Cloud Computing
 - Communicating with the Cloud using Web Services. •
- Cloud Computing & IoT.
- Popular Cloud Computing Services for Sensor Management.

Project 8: Use Arduino to Upload free data from Environmental Sensors to Cloud Server. Project 9: Automatically Tweet Sensor Data on Twitter.

Project 10: Receive Automatic Call Notification on Mobile Phone for Burglar Alarm using IoT Platform.

Project 11: Control Electronic Devices from anywhere across the world using Internet & Mobile App.

Benefits of Participants:-

1. Build your own IOT Device and get IOT Certified.
2. Understanding IOT and its business
3. End to End IOT Architecture
4. Sensors and Embedded Systems
5. Hardware & Software Development Platform for IOT
6. All network protocols for IOT (to connect devices)
7. Cloud, Web Services, Big Data, Big Data Analytic and Visualization
8. Practical for all above mention topics
9. Individual KIT for each Team
10. Get your hands dirty with hardware and create your own IOT Devices
11. Understand the concept behind smart cities, smart wearable's & smart switches.
12. Well Trained Faculties from Intelogy.
13. 100% hands on experience in building, circuit designing as well as programming.
14. Study Material on soft copy

Output of 2 Days Training Program:-

- Students will be confident and capable to build their own IOT devices.
- Attendee will be capable of designing any application by integrating multidisciplinary concepts and can understand all the process of smart products like smart switches, smart watches, smart meters etc.
- Participants can choose their career in IOT field and can publish their papers in **International/National Journals.**
- Students will be ready for the 21'st century's workshop.

Eligibility:

There are no prerequisites for joining this workshop. Anyone interested, can join this workshop. While a basic C Programming would be helpful, it is not compulsory. Student from Electronics, Electrical, Instrumentation, CS/IT any branch student can attend this workshop.



THANK YOU !!!